DEPARTMENT OF THE ARMY
HUNTSVILLE CENTER, CORPS OF ENGINEERS
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8 August 2011

MEMORANDUM OF UNDERSTANDING BETWEEN HUNTSVILLE ENGINEERING AND SUPPORT CENTER AND FOX ARMY HEALTH CENTER, REDSTONE ARSENAL

Subject: Public Access Defibrillator (PAD) Program

1. PURPOSE – To provide policy and guidance in the use of Automated External Defibrillators (AEDs) within the U.S. Army Engineering and Support Center, Huntsville (USAESCH).

2. APPLICABILITY – This program applies to all USAESCH personnel and contractors within the building at 4820 University Square, U.S. Army Corps of Engineers personnel supported in the Bevill Center at 550 Sparkman Drive and in buildings 4801 University Square (Suite 1 and 20-21), 4835 University Square (Suite 5) and the White Tiger Building located at 4901 University Square, in Huntsville, Alabama.

3. REFERENCES –

a. EM 385-1-1, Safety and Health Requirements Manual, 15 September 2008.

b. Department for Health & Human Services - Guidelines for Public Access Defibrillation Programs (PAD) in Federal Facilities, 18 January 2001.

c. LIFEPAK® 500 Automated External Defibrillator Operating Instructions.

d. Philips Heartstart® FRx Defibrillator Operating Instructions.

e. USAESCH Occupant Emergency Plan, September 2009.

4. BACKGROUND – Ventricular fibrillation is a life-threatening condition in which the heart's electrical signals become erratic and the heart ceases to pump blood effectively. By applying an electrical shock, the heart's natural rhythm can be restored. An AED is a device that can analyze the heart's rhythm and, if necessary, alerts the user to deliver a shock to the victim of sudden cardiac arrest. This shock may help the heart to re-establish an effective rhythm of its own. An AED is a small, portable device, fairly easy to use by trained individuals. In cases of sudden cardiac arrest, response time is critical. Having AED's available in the workplace allows critical care to begin before the arrival of off-site emergency medical services (EMS).

5. PROGRAM MANAGEMENT AND OVERSIGHT – The USAESCH Chief, Safety Office is designated as the AED Site Coordinator and is responsible for the management of the AED

program, as stated in this policy. The Site Coordinator will ensure that an AED Program is established for all AED equipment assigned to USAESCH, users are identified, trained and certified, the local Emergency Management Service (EMS) is notified of an in-place AED program, and the program receives periodic reviews by all participants to ensure use protocols are up to date.

6. The USAESCH Safety Office (SO) will provide oversight of the use of AED's, in consultation with the Chief, Occupational Medicine from the Fox Army Health Center (FAHC), USAESCH's designated medical authority for occupational health. This oversight consists of the first time placement of AED's, training and certification plan of AED operators, equipment maintenance, and review of actions taken after use on a patient. After an AED has been used on a patient, the USAESCH SO will be notified within 24 hours of the use with a report of circumstances written by the user. The AED Report of Circumstances can be found in Appendix A. A review board composed of the Site Coordinator, USAESCH SO safety personnel, the medical authority, and other individuals designated by the medical authority or Site Coordinator will review this report to decide if any changes in procedures, training, or equipment need to be made.

7. PLACEMENT – AED's are located on each of the three floors of the Center's main building at 4820 University Square, mounted on the wall between the restrooms in the center corridor. A unit is also mounted in each of the following areas: Bevill Center, in the PDSC office area, on the first floor, 550 Sparkman Drive; Suite 1, Building 4801, University Square; Suite 5, Building 4835, University Square; and White Tiger Building, 4901 University Square, in Huntsville, Alabama. The AED's are secured in alarmed cabinets to identify unauthorized use, tampering, or theft, as well as alert others that assistance may be needed. Only certified users; those personnel directed by certified users; and those personnel authorized to perform maintenance are allowed to remove the device from its station and/or bring the AED to the patient area. Certified users will be listed by name and work area near the AED station. Associated responder supplies will also be placed near the AED.

8. OPERATORS AND ASSOCIATED TRAINING – All users of the AED will be certified in the device's operation and maintenance through initial and recurrent training programs. The user's certification will also require current cardiopulmonary resuscitation (CPR) and first aid attendant training/ certification. The training program and required certification will be managed through the USAESCH SO. The level of training received is identified as Lay Responder/Rescuer (LRR) Training. Certified users will be designated first aid attendants. See Appendix B to this document for details of the USAESCH AED Training and Certification Plan.

9. USE/PROCEDURES – Only commercially available AEDs that have been cleared for marketing by the Food and Drug Administration (FDA) should be considered for use in a PAD program. Currently, there are Federal Supply Services (FSS) Supply contracts for AEDs. A prescription from a physician overseeing the AED placement must accompany the order before the AED manufacturer can accept the order and deliver the AED. FAHC is that prescribing authority for USAESCH.

a. The AEDs currently in use are the LIFEPAK 500 AED and the Philips Heartstart FRx Defibrillator. They are semi-automatic defibrillators that use software algorithms, which analyze the patient's electrocardiographic (ECG) rhythm and indicates whether it detects a shockable rhythm or not. These AEDs require operator interaction in order to defibrillate the patient. The AEDs are only to be used by personnel who have had training, and been certified, in first aid, CPR, and AED use. The AEDs are to be used only on patients in cardiopulmonary arrest. The patient must be unconscious, pulseless, and not breathing spontaneously before the device is used to analyze the ECG rhythm. These devices are not intended for use on children under eight years of age.

b. The LIFEPAK 500 AED uses disposable QUIK-COMBO™ pacing/defibrillation/ECG electrodes and FAST-PATCH® disposable defibrillation/ECG electrodes which allows rapid transfer to other devices that also use the same type of electrodes. Huntsville Emergency Medical Services, Incorporated (HEMSI) also uses the LIFEPAK 500 and in the event of a 911 call, will be the emergency medical service dispatched to render assistance. Because of our compatibility with HEMSI, it will allow for the quick transfer of patient care to their emergency medical technicians and equipment.

c. The LIFEPAK 500 AED will digitally record patient data as a record. This recorded data may be transferred by direct connection to a printer, computer, or modem to remote computer. This data will be recorded and analyzed after every use to assess patient care, quality assessment and system performance. This option will digitally record sounds nearby and AED voice prompts during use.

d. The Lifepak 500 AED delivers up to 360 joules of electrical energy. Improperly used, this electrical energy may cause serious injury or death. This device will not be used in the presence of flammable gases or anesthetics. Certain equipment operating in the immediate vicinity of this device may emit strong electromagnetic or radio frequency interference (RFI) such as from cellular telephones, which could affect the performance of the device. The responder must alert those employees in the immediate vicinity to turn off their cellular telephones and when HEMSI arrives, be attentive to their radio traffic paying special attention to the frequent or rapid keying of the EMS radios on and off. If rapid keying is being performed, please advise the HEMSI technician that rapid keying may interfere with the proper operation of the AED. Use only accessories specified in the LIFEPAK 500 AED operating manual with the device.

e. The Philips Heartstart FRx Defibrillator comes equipped with a disposable, lithium manganese dixoide, long-life battery that will typically last – in a standby mode – for four years in the defibrillator. This AED comes with Smart Pads II. These Smart Pads eliminates the expense of having to purchase different pad sets for different patient types. These pre-connected pads are packaged in a semi-rigid pads case for added protection, and are equipped with a Heartstart-compatible plug for easy hand-off to Philips ALS Defibrillators and to competitive defibrillators with adapters. Use only accessories specified in the Heartstart operating manual with the device.

f. The Heartstart FRx AED delivers an electrical energy pulse of a nominal 150 joules into a 50-ohm load for adults. The device follows pre-configured settings.

g. When the need to use the AED arises, established emergency notification protocol will be used to alert first aid attendants, HEMSI, the USAESCH SO, and the security guard(s) of the particular situation. These procedures are outlined in the USAESCH Occupant Emergency Plan.

10. EQUIPMENT MAINTENANCE –

a. Maintenance, to include routine inspection, service after use, and parts repair/replacement will be per the manufacturer's guidelines, as directed by the USAESCH SO, or the Center's supporting medical authority. Inspection, use, and maintenance will be documented and kept on Subject: Public Access Defibrillator (PAD) Program file in the USAESCH SO. These AEDs store Test/Use Logs as indicated in the operator's manuals. These logs will be downloaded, as required. USAESCH SO will coordinate with HEMSI in downloading the logs.

b. The LIFEPAK 500 AED performs an automated self-test every 24 hours and every time the AED is turned on. The Readiness Display on the device's handle will indicate an *OK* if the self-test has completed successfully. If service is required or the device detects that the battery needs replacing, the *OK* indicator disappears and a service and/or battery indicator appears. If this should occur, contact the USAESCH SO immediately.

c. The Heartstart FRx AED stores the first 15 minutes of ECG and the entire incident's events and analysis decisions. This log can be downloaded as required thru the use of data management software and retrieved through the AED's infrared data port. The AED performs daily automatic self tests on the internal circuitry, waveform delivery systems, pads, and battery capacity.

d. USAESCH SO personnel will perform and complete inspections of the system(s) monthly IAW the Operator's manuals and Appendix C.

12. LEGAL ISSUES—As a general rule, The Federal Tort Claims Act, 28 U.S.C. Sections 1346 (b), 2671-80, (FTCA) immunizes Federal employees acting within the scope of their employment from personal liability for most tortuous conduct. Whether a person is acting within the scope of employment is determined in accordance with state law. Those personnel assigned as First Aid Attendants, having received the mandatory training listed in Appendix B and being certified by the American Red Cross (ARC) or other nationally recognized training organizations, are presumably working within the scope of employment when administering first aid, CPR, or AED life-saving measures. Furthermore, Federal Law (Public Law 106-505, Section 404) provides immunity to employees using an AED device on a victim of a perceived medical emergency. However, the employer is only immune from liability if the employer notifies emergency response of the most recent placement of AED devices, properly maintains and tests the devices, and provides appropriate training in the use of the devices to the employees who were reasonably expected to use the devices. This law does not supersede State law where States provide immunity for persons operating AED devices in emergency situations. The State of Alabama passed a "Good Samaritan" Law in 1999 which provides limited immunity for Lay

in the Federal Law. See Alabama Code section 6-5-332.3. This immunity does not cover a person who is grossly negligent, but rather immunizes a person who acts as an ordinary prudent person would have acted under the same or similar circumstances.

13. This program will be reviewed as required.

LTC WILLIAM L. BURRUSS
Lieutenant Colonel, Corps of Engineers
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13 Sep 11
DATE

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Appendix A

U.S. Army Engineering & Support Center

AED Report of Circumstances

To be completed immediately after a cardiac arrest occurs and the AED is put on a patient. Form should be filled out by the main caregiver at the scene and returned to the Safety & Occupational Health Office within 24 hours.

1. Incident location: _____

_____

2. Date of Incident: _____ / _____ / _____ 3. Estimated Time of Incident: _____ a.m./p.m.

4. Patient Gender: Male [ ] Female [ ] 5. Estimated Age of Patient: _____

6. Did the patient collapse (become unresponsive)? Yes [ ] No [ ]

6a. If YES, what were the events immediately prior to collapse (check all that apply):

Difficulty Breathing [ ] Chest Pain [ ] No Sign or Symptoms [ ]
Electrical Shock [ ] Injury [ ] Unknown [ ]

6b. Was someone present to see the person collapse? Yes [ ] No [ ]

If YES, was that person an AED responder? Yes [ ] No [ ]

6c. After the collapse, at the time of patient assessment and just prior to the AED pads being applied,

Was the patient breathing? Yes [ ] No [ ]

Did the person have a pulse? Yes [ ] No [ ]

7. Was CPR given prior to 911 EMS arrival? Yes [ ] Go to 7.a. No [ ] Go to 8.

7.a. Estimated time CPR started: _____a.m./p.m.

Was CPR started prior to the arrival of a trained AED responder? Yes [ ] No [ ]

Who started CPR? Bystander [ ] Trained AED responder [ ]

8. Was an HNC AED brought to the patient's side prior to 911 EMS arrival? Yes [ ] No [ ]

If NO, briefly describe why and skip to question 15.: _____

If YES, estimated time AED at patient's side: _____ a.m./p.m.

9. Were the AED pads put on the patient? Yes [ ] No [ ]

If YES, was the person who applied the pads a: Trained AED Responder [ ] Bystander [ ]

10. Was the AED turned on? Yes [ ] No [ ]

If YES, estimated time AED was turned on: _____ a.m./p.m.

11. Did the AED ever shock the patient? Yes [ ] No [ ]

If YES, estimated time of 1st shock by AED: _____ a.m./p.m.

If shocks were given, how many were delivered prior to EMS arrival? #_____

12. Name of person operating the AED: _____

Is this person a trained AED responder: Yes [ ] No [ ]

Highest level of medical training of person administering the AED:

Public AED trained: [ ] First Responder AED trained [ ]
EMT-B [ ] CRT/EMT-P [ ] Nurse/Physician [ ]
Other Health Care Provider [ ] No Known Training [ ]

13. Was there any mechanical difficulty or failure associated with the use of the AED: Yes [ ] No [ ]

If YES, briefly explain. _____

_____

14. Were there any unexpected events or injuries that occurred during the use of the AED? Yes [ ] No [ ]

If YES, briefly explain: _____

_____

15. Indicate the patient's status at the time of 911 EMS arrival:

Pulse restored: Yes [ ] No [ ] Don't know [ ] Time restored: _____ a.m./p.m.

Breathing restored Yes [ ] No [ ] Don't know [ ] Time restored: _____ a.m./p.m.

Responsiveness Yes [ ] No [ ] Don't know [ ] Time responsive _____ a.m./p.m.

16. Was the patient transported to the hospital: Yes [ ] No [ ]

If YES, how? EMS Ambulance [ ] Private Vehicle [ ] Other: _____

Report completed by: _____

_____ Date: _____
Signature

Office phone: _____ Serial Number of AED: _____

RETURN TO THE SAFETY OFFICE WITHIN 24 HOURS FOLLOWING THE INCIDENT. PLEASE DIRECT QUESTIONS TO THE SAFETY OFFICE AT (256) 895-1583, 1225 or 1242.

Appendix B

USAESCH AED TRAINING & CERTIFICATION PLAN

The courses shown below are the required training for individuals who will be certified to use the Center's Automated External Defibrillators (AEDs). Initial and recurrent training will be scheduled and records maintained by the USAESCH Safety & Occupational Health (S&OH) Office. The USAESCH S&OH Office will periodically review contract training programs to ensure they met Federal guidelines and site-specific requirements.

Standard First Aid (Work Place) – A five to six-hour course that follows the guidelines of OSHA Directive CPL 2-2.53 (Guidelines for First Aid Training Programs). Course is tailored for individuals who are designated first aid attendants in a workplace environment. Specifically, an office environment as is found at USAESCH. Individuals who successfully complete this training will be recognized as certified in Basic First Aid for three years from completion date of training. At USAESCH, the local American Red Cross will be the source of training for this course.

Cardiopulmonary Resuscitation (CPR) – A four-hour course taught by certified trainers using American Heart Association guidelines. This training involves the hands-on training for adult CPR and prepares individuals to respond to breathing and cardiac emergencies. This training may also include a one to two-hour segment in general AED training. Successful completion of this course will certify the individual for one year from date of training. The American Red Cross will be the source of training for this course. This course will be required for those not previously certified in CPR or those requiring a more in-depth curriculum. Certification is typically on an annual basis.

Heartsaver AED Course – A three and a half to four-hour course in basic CPR and the use of the AED during sudden cardiac arrest. This course is for those who have been previously trained in CPR. For first aid attendant certification purposes, this course replaces the standard CPR course mentioned above for recurrent training. This course will be tailored to the LifePak 500 AED. Because of similar equipment, HEMSI will be the source of training for this course. This course carries a biennial certification, but may be supplemented with annual in-house refresher training.

AED Specific Training – A one to two hour course of instruction that teaches an individual, who has been trained in CPR, how to safely use the LifePak 500 AED in a ventricular defibrillation situation. Primarily, this course is the familiarization training for the LifePak 500 AED. This course may be incorporated into the Heartsaver AED course above.

Appendix C

USAESCH AED Monthly Maintenance/Operator's Checklist

Location:	Serial Number of AED:	AED Operator:	Year:

Item to check (the service manual for your AED may have different check points)	Corrective Action	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
	Note: check each item as you complete the inspection, in the appropriate monthly column, if item is OK.												
1. Examine the case, connectors, and battery well for:	**Note: Notify HNC-SO if the AED is taken out of service due to daily inspection.**												
Foreign Substances	Clean the equipment if substance present												
Damage or Cracks	Call the Service number listed in your service manual*												
2. Remove the battery and examine pins for bending or discoloration	Discard and replace the battery if pins are bent or discolored												
3. Check expiration date on battery and electrodes	Replace if expired												
4. Examine the accessory cables for serviceability per service manual	Replace damaged or broken parts												
5. With the battery installed perform functional tests per service manual, areas that are included are:	If no messages call service number in service manual												
Self-Test messages	If they do not light, call service number in service manual												
Momentary illumination of each LED and all LED Segments													
Battery Low or Replace Battery Self Test message received	Replace the battery immediately												
Service indicator or Call Service message received	Call service number in service manual*												
6. Supplies – check to see: Exam gloves present and serviceable	Replace if necessary												
Pocket mask with one way valve present and serviceable	Replace if necessary												
Razor present and serviceable	Replace if necessary												
	Person performing monthly inspection, initial in this space for the specific month.→												

***Service Number for Medtronic Lifepak 500 – 1-800-443-1142. Service number for Philips M5066A – 1-866-333-4246.**